



ESS/QC/110V-Y3/2021-22-CB1A

Date: 01-04-2022

**1. TEST REPORT ON CEMENT CONCRETE CUBES:****Sub:** Testing of Concrete Cubes (for 28days Compressive Strength).**{Project\*}** Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03) }**Ref.:** Material testing/PMC/21-22,Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

**RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE****CUBE SPECIMENS**

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>15</sub>**TABLE 1.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 04-03-22         | 01-04-22        | 28          | 22500                       | 405                 | 18.00                                      | 18.37      |
|       | 002                       | "                | "               | "           | "                           | 420                 | 18.67                                      |            |
|       | 003                       | "                | "               | "           | "                           | 415                 | 18.44                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Ambabhavani Layout 4th Cross Rd.

*(Signature)*  
 ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರ  
 ಯುಪಟಂಕ ಸುಪನಗರ ಸುಪವಿಭಾಗ  
 ಬಿ.ಎಂ.ಓ. ಬೆಂಗಳೂರು-106

Page No. 1/1,





ESS/QC/110V-Y3/2021-22-CB2A

Date: 04-04-2022

**1. TEST REPORT ON CEMENT CONCRETE CUBES:****Sub:** Testing of Concrete Cubes (for 28days Compressive Strength).**{Project\*:** Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03). }**Ref:** Material testing/PMC/21-22,Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

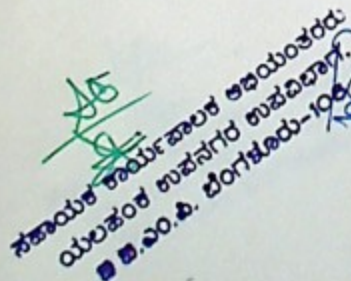
**RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE****CUBE SPECIMENS**

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>15</sub>**TABLE 1.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 05-03-22         | 04-04-22        | 30          | 22500                       | 400                 | 17.78                                      | 18.30      |
|       | 002                       | "                | "               | "           | "                           | 415                 | 18.44                                      |            |
|       | 003                       | "                | "               | "           | "                           | 420                 | 18.67                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Ambabhavani Layout 5th Cross Rd Ch: 0.00m to 30.00m.


  
 ಸಾಧಾರಣ ಪರೀಕ್ಷಾ ಅಧಿಕಾರಿ  
 ಯುನೈಟೆಡ್ ಸ್ಟೇಟ್ಸ್ ಬಾಂಕ್ ಲಿಮಿಟೆಡ್  
 ಬಿ.ಬಿ.ಎ. ಕಛೇರಿ-108

Page No. 1/1,





GST : 29BLYPD0958A2ZW

**ESS ESS BUILDERS**

ESS/QC/110V-Y3/2021-22-CB5A

Date: 13-04-2022

**1. TEST REPORT ON CEMENT CONCRETE CUBES:****Sub:** Testing of Concrete Cubes (for 28days Compressive Strength).**{Project\*:** Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03) }**Ref.:** Material testing/PMC/21-22,**Report Required for:** Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.**Name of the Agency/Contractor\*:** Sri. Gopireddy, Bangalore.**RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE****CUBE SPECIMENS**

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>15</sub>**TABLE 1.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 16-03-22         | 13-04-22        | 28          | 22500                       | 390                 | 17.33                                      | 18.07      |
|       | 002                       | "                | "               | "           | "                           | 420                 | 18.67                                      |            |
|       | 003                       | "                | "               | "           | "                           | 410                 | 18.22                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Avaikya Layout Cross Rd-5 Ch: 0.00m to 29.00m.

ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ ಅವರ ಅನುಮೋದನೆ  
ಯಲ್ಲದಂತೆ ಸುಪರಿನ್ಟೆಂಡೆಂಟ್ ಆಗಿರುತ್ತೇನೆ.  
ಇ.ಎಂ.ಎ. ಬೆಂಗಳೂರು-106

Signature  
AE

Page No. 1/1,





ESS/QC/110V-Y3/2021-22-CB14A

Date: 04-04-2022

**1. TEST REPORT ON CEMENT CONCRETE CUBES:****Sub:** Testing of Concrete Cubes (for 28days Compressive Strength).**{Project\*:** Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03) }**Ref.:** Material testing/PMC/21-22,**Report Required for:** Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.**Name of the Agency/Contractor\*:** Sri. Gopireddy, Bangalore.**RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE****CUBE SPECIMENS**

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>20</sub>**TABLE I.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 05-03-22         | 04-04-22        | 30          | 22500                       | 510                 | 22.67                                      | 22.37      |
|       | 002                       | "                | "               | "           | "                           | 495                 | 22.00                                      |            |
|       | 003                       | "                | "               | "           | "                           | 505                 | 22.44                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Sai Nagara 2nd Phase 10th Cross Rd Ch: 18.10m to 26.70m.

Page No. 1/1,

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧಿಕಾರಿಗಳು  
ಯಲಹಂಕಾ ಸಾಟಲೈಟ್ ಟೌನ್ ಸಬ್ ಡಿವಿಷನ್,  
ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-106





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC/110V-Y3/2021-22-CB18A

Date: 05-04-2022

## 1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03) }

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

### RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

#### CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>20</sub>

TABLE I.1:

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 08-03-22         | 05-04-22        | 28          | 22500                       | 500                 | 22.22                                      | 22.44      |
|       | 002                       | "                | "               | "           | "                           | 510                 | 22.67                                      |            |
|       | 003                       | "                | "               | "           | "                           | 505                 | 22.44                                      |            |

The result of the materials tested meets the standards and hence can be used for the work Sai Nagara 2nd Phase 3rd Cross Rd Ch: 0.00m to 30.00m .

ಸಹಾಯಕ ಅಯುಕ್ತಾಲಯ ಅಧ್ಯಕ್ಷರು  
ಯಲಹಂಕ ಸಾಟಲೈಟ್ ಉಪವಿಭಾಗ,  
ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-108

Page No. 1/1,





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22- C1

Date: 21-02-2022

## 1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

### PHYSICAL TESTS ON CEMENT

Grade \* : 53,  
Type \* : O.P.C

TABLE 1.1:

| SL No | Name of Test                                                 | Test Results  | Requirements as per IS 8112-1989 |
|-------|--------------------------------------------------------------|---------------|----------------------------------|
| 1     | Initial setting time                                         | 161 min       | Shall not be less than 30 min    |
| 2     | Final setting time                                           | 275 min       | Shall not be more than 600 min   |
| 3     | Fineness (by dry sieving on IS 90 micron sieve)              | 2.19%         | Not to exceed 10.0%              |
| 4     | Soundness test (by Le-Chatelier's method)                    | 2.06mm        | Shall not be more than 10 mm     |
| 5     | Compressive strength<br>a) 3 days (average of three results) | 28.75 N/Sq mm | Shall not be less than 27 N/Sqmm |

The result of the materials tested meets the standards and hence can be used for the work  
Muneshwara Layout Cross Rd-4 Ch: 45.00m to 60.00m

Page No. 1/1,

ಇದರಲ್ಲಿ ಉಪಯುಕ್ತವಾದ ಮಾಹಿತಿಗಳು  
ಯಶಸ್ವಿಯಾಗಿರುತ್ತವೆ ಎಂದು  
ಉಪಯುಕ್ತವಾಗಿರುತ್ತವೆ ಎಂದು  
ಉಪಯುಕ್ತವಾಗಿರುತ್ತವೆ ಎಂದು

Signature  
AE





GST : 29BLYPD0958A2ZW

**ESS ESS BUILDERS**

ESS/QC-2/110V-Y3/2021-22-CE1

Date: 23-02-2022

**1. TEST REPORT ON CEMENT:**

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

**PHYSICAL TESTS ON CEMENT**Grade \* : 53,  
Type \* : O.P.C**TABLE 1.1:**

| SL No | Name of Test                                                 | Test Results  | Requirements as per IS 8112-1989 |
|-------|--------------------------------------------------------------|---------------|----------------------------------|
| 1     | Initial setting time                                         | 156 min       | Shall not be less than 30 min    |
| 2     | Final setting time                                           | 270 min       | Shall not be more than 600 min   |
| 3     | Fineness (by dry sieving on IS 90 micron sieve)              | 1.86 %        | Not to exceed 10.0%              |
| 4     | Soundness test (by Le-Chatelier's method)                    | 1.94 mm       | Shall not be more than 10 mm     |
| 5     | Compressive strength<br>a) 3 days (average of three results) | 28.55 N/Sq mm | Shall not be less than 27 N/Sqmm |

The result of the materials tested meets the standards and hence can be used for the work  
Muneshwara Layout

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧ್ಯಯನಕರು  
ಯಲಹಂಕಾ ಉಪನಗರ ಉಪವಿಭಾಗ  
೩೩.೦೨.೨೩ ಬೆಂಗಳೂರು-೫೬೦೦೭೮

Page No. 1/1,





GST : 29BLYPD0958A2ZW

**ESS ESS BUILDERS**

ESS/QC-2/110V-Y3/2021-22-CA1

Date: 23-02-2022

**1. TESTING OF COARSE AGGREGATES (20 mm):**

Sub: Testing of Construction Materials.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

**Table - 1.1 : SIEVE ANALYSIS :**

| IS Sieve Size, mm | Percentage passing | Requirements as per IS 383-1970 (Reaffirmed on 2002)<br>% Passing |          |
|-------------------|--------------------|-------------------------------------------------------------------|----------|
|                   | 20 mm Sample       | Single size                                                       | Graded   |
| 40 mm             | 100.00             | 100.00                                                            | 100.00   |
| 20 mm             | 97.25              | 85-100                                                            | 90 - 100 |
| 10 mm             | 45.60              | 0 - 20                                                            | 25 - 55  |
| 4.75 mm           | 3.95               | 0 - 5                                                             | 0 - 10   |

**TABLE 1.2 :**

| SL No | Test conducted  | Results | Requirements as per IS:383-1970 & Tests<br>Conforms to IS 2386( Part I to IV) - 1963<br>( Reaffirmed on 2002) |
|-------|-----------------|---------|---------------------------------------------------------------------------------------------------------------|
| 1.    | Flakiness Index | 26.45%  | Not to exceed 25 %                                                                                            |
| 2.    | Crushing value  | 28.74%  | Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces     |

The result of the materials tested meets the standards and hence can be used for the work  
Muneshwara Layout Cross Rd-4 Ch: 45.00m to 60.00m

ಸಹಾಯಕ ಅಧೀಕ್ಷಕರು  
ಯಲಹಂಕಾ ಸಾಟಲೈಟ್ ಟೌನ್  
ಉಪವಿಭಾಗ-106.

Page No. 1/1





GST : 29BLYPD0958A2ZW

**ESS ESS BUILDERS**

ESS/QC-2/110V-Y3/2021-22-CB2

Date: 03-03-2022

**1. TEST REPORT ON CEMENT CONCRETE CUBES:****Sub:** Testing of Concrete Cubes (for 07days Compressive Strength).

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

**Ref.:** Material testing/PMC/21-22,Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

**RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE****CUBE SPECIMENS**

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>20</sub>**TABLE I.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 24-02-22         | 03-03-22        | 07          | 22500                       | 380                 | 16.89                                      | 16.81      |
|       | 002                       | "                | "               | "           | "                           | 370                 | 16.44                                      |            |
|       | 003                       | "                | "               | "           | "                           | 385                 | 17.11                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Muneshwara Layout Cross Rd-4 Ch: 44.50m to 59.50m

Page No. 1/1,



ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧಿಕಾರಿಗಳು  
ಯಶವಂತರ ಸಾಬನಗರ ಸುಪರಿಭಾಗ,  
ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-106



GST : 29BLYPD0958A2ZW

**ESS ESS BUILDERS**

ESS/QC-2/110V-Y3/2021-22-CB1A

Date: 24-03-2022

**1. TEST REPORT ON CEMENT CONCRETE CUBES:**

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

**RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE****CUBE SPECIMENS**

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>20</sub>**TABLE 1.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 24-02-22         | 24-03-22        | 28          | 22500                       | 505                 | 22.44                                      | 22.59      |
|       | 002                       | "                | "               | "           | "                           | 520                 | 23.11                                      |            |
|       | 003                       | "                | "               | "           | "                           | 500                 | 22.22                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Muneshwara Layout Cross Rd-4 Ch: 45.00m to 60.00m

ಶಾಖಾ ಸಹಾಯಕರ  
ಯುನೈಟೆಡ್ ಸ್ಟಾಟಲ್ ಸಂಸ್ಥೆ  
ಒ.ಪಿ.ಎಂ.ಓ. ಬೆಂಗಳೂರು-106

Signature

Page No. 1/1,





GST : 29BLYPD0958A2ZW

**ESS ESS BUILDERS**

ESS/QC-2/110V-Y3/2021-22-CB2A

Date: 24-03-2022

**1. TEST REPORT ON CEMENT CONCRETE CUBES:****Sub:** Testing of Concrete Cubes (for 28days Compressive Strength).**{Project\*:** Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}**Ref.:** Material testing/PMC/21-22,**Report Required for:** Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.**Name of the Agency/Contractor\*:** Sri. Gopireddy, Bangalore.**RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE****CUBE SPECIMENS**

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>20</sub>**TABLE 1.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 24-02-22         | 24-03-22        | 28          | 22500                       | 515                 | 22.89                                      | 22.81      |
|       | 002                       | "                | "               | "           | "                           | 500                 | 22.22                                      |            |
|       | 003                       | "                | "               | "           | "                           | 525                 | 23.33                                      |            |

The result of the materials tested meets the standards and hence can be used for the work work  
Muneshwara Layout Cross Rd-4 Ch: 44.50m to 59.50m

Page No. 1/1,

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧಿಕಾರಿ  
ಯಶವಂತರ ಉಪನಗರ ಉಪವಿಭಾಗ,  
೩೩.೩೦.೩. ಬೆಂಗಳೂರು-೧೦೬





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

Date: 04-03-2022

**TABLE 1.2**

| SL No | Test conducted            | Test Results | Tests Conforms to IS 2386( Part I to IV)- 1963 ( Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013. |
|-------|---------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.    | Water absorption, %       | 0.42 %       | Not more than 2.0 %                                                                                                                                 |
| 2.    | Liquid Limit, %           | 18.36        | Not more than 25.0 %                                                                                                                                |
| 3.    | Plasticity Index, %       | NP           | Not more than 6.0 %                                                                                                                                 |
| 4.    | Moisture Content, %       | 6.52         | -----                                                                                                                                               |
| 5.    | Aggregate Impact Value, % | 28.79        | Not more than 40.00 %                                                                                                                               |

The result of the materials tested meets the standards and hence can be used for the work  
Muneshwara Layout 1st Cross Rd Ch: 30.00m to 60.00m




Page No. 2/2

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧೀಯತೆಗರ  
ಯಲಪಂತ ಉಪನಗರ ಉಪವಿಭಾಗ,  
ಇ.ಡಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-108



GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

Date: 07-03-2022

**TABLE 1.2**

| SL No | Test conducted                             | Test Results | Tests Conforms to IS 2386( Part I to IV)- 1963 ( Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013. |
|-------|--------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.    | Aggregate Impact Value                     | 27.56%       | Not more than 30.00 %                                                                                                                               |
| 2.    | Combined Flakiness and Elongation index, % | 28.69 %      | Not more than 35.0 %                                                                                                                                |
| 3.    | Water absorption, %                        | 0.43 %       | Not more than 2.0 %                                                                                                                                 |
| 4.    | Plasticity Index, %                        | NP           | Not more than 6.0 %                                                                                                                                 |

The result of the materials tested meets the standards and hence can be used for the work  
Muneshwara Layout Cross Rd-1 Ch: 0.00m to 30.00m

Page No. 2/2



46  
12  
ನೀಡುವ ಮೂಲಕ ಮೂಲ ಕಾರ್ಯದರ್ಶಿ  
ಅಧಿಕಾರ ಮುಕ್ತಾಯ ಮಾಡಲಾಗಿದೆ.  
ಶ.ಸ.ಎ.ಎ. ದೃಢೀಕರಣ-106



GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/I10V-Y3/2021-22-W3

Date: 09-03-2022

## TEST REPORT ON WET MIX MACADAM MIX

(GRADATION TEST)

**Sub:** To conduct Gradation test on Wet Mix Macadam (WMM) Mix.**{Project\*:** Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}**Ref.:** Material testing/PMC/21-22,Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## TEST RESULTS

### 1. Gradation Test:

TABLE 1.1

| Sieve Size<br>mm | Percent by Weight passing the<br>Sieve from the sample supplied<br>(Obtained Gradation) | Specified<br>Limits as per MoRTH<br>Specifications, V Revision-2013 |
|------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 53.00            | 100.00                                                                                  | 100                                                                 |
| 45.00            | 97.40                                                                                   | 95-100                                                              |
| 26.50            | ---                                                                                     | -                                                                   |
| 22.40            | 73.15                                                                                   | 60-80                                                               |
| 11.20            | 56.25                                                                                   | 40-60                                                               |
| 4.75             | 33.65                                                                                   | 25-40                                                               |
| 2.36             | 25.95                                                                                   | 15-30                                                               |
| 0.600            | 18.30                                                                                   | 8-22                                                                |
| 0.075            | 4.05                                                                                    | 0-5                                                                 |

The result of the materials tested meets the standards and hence can be used for the work  
Muneshwara Layout Cross Rd-2 Ch: 30.00m to 60.00m

*[Signature]*  
Page No. 1/2,



*[Signature]*  
ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧ್ಯಯನಕಾರ  
ಯುಪಕರಣ ಉಪನಿರ್ದೇಶಕರು  
ಇ.ಪಿ.ಎಂ.ಐ. ಬೆಂಗಳೂರು-106



GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/BD1

Date: 08-03-2022

## 1. TEST REPORT ON BITUMEN SAMPLE:

Sub: Testing of Bitumen sample VG-30 Grade.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

Technical Reference: Ministry of Road Transport and Highways, V Revision, 2013 and IS 73: 1992.

**TABLE 1.1:**

| SL No | Details                  | Test Results | Requirements as per I.S 73-1992 Specifications |
|-------|--------------------------|--------------|------------------------------------------------|
| 1.    | Penetration at 25° C     | 52.40° C     | Min. 45                                        |
| 2.    | Ductility Value at 25° C | 108.90 cm    | 40                                             |
| 3.    | Flash point              | 248° C       | Minimum 220° C                                 |
| 4.    | Softening point          | 51.20° C     | Min. 47                                        |

The result of the materials tested meets the standards and hence can be used for the work  
Ambabhavani Nagara 2nd Cross Rd Ch: 0.00m to 21.00m

Page No. 1/1,



ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧಿಕಾರಿಗಳು  
ಯಲಹಂಕ ನಗರ ಉಪನಗರ ಉಪವಿಭಾಗ,  
ಇ.ಉ.ಪ.ಪ. ಬೆಂಗಳೂರು-106



GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/CD1

Date: 08-03-2022

## 1. TEST REPORT ON COARSE AGGREGATE:

**Sub:** Testing of Coarse Aggregate used in Dense Graded Bituminous Macadam.**{Project\*:** Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}**Ref.:** Material testing/PMC/21-22,**Report Required for:** Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.**Name of the Agency/Contractor\*:** Sri. Gopireddy, Bangalore.**TABLE 1.1:**

| SL No | Test conducted                             | Test Results | Tests Conforms to IS 2386( Part I to IV)- 1963 ( Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.O.R.T.H Specification, V Revision -2013. |
|-------|--------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.    | Aggregate Impact Value                     | 23.09%       | Not more than 27.00 % for DBM                                                                                                                       |
| 2.    | Combined Flakiness and Elongation index, % | 26.74%       | Not more than 35.0 %                                                                                                                                |
| 3.    | Water absorption, %                        | 0.42%        | Not more than 2.0 %                                                                                                                                 |
| 4.    | Specific gravity                           | 2.62         | -----                                                                                                                                               |
| 5.    | Soundness                                  | 6.89 %       | Max. 12 % in Sodium Sulphate                                                                                                                        |

The result of the materials tested meets the standards and hence can be used for the work  
Ambabhavani Nagara 2nd Cross Rd Ch: 0.00m to 21.00m

ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ  
ಯುಪನಿಗರ ಸುಪರವೀಷಾರ,  
ಕೆ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-106

Page No. 1/1,





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/DS3

Date: 17-03-2022

## 1. TEST REPORT ON BITUMINOUS MIXES : (STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for DBM mix sample.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

### TEST RESULTS

Table 1: Properties of DBM (Gr-2) Mix

| Sl. No. | Test Property                                 | *Test results obtained by Marshall method | Requirements of Dense Bituminous Macadam, Grade-2 as per M.o.R.T&H (IV Revision)-2001 Specifications |
|---------|-----------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------|
| 1       | Marshall Stability (75 blows) (At 60°C), kgs. | 1258                                      | 900                                                                                                  |
| 2       | Marshall Flow at 60°C, mm.                    | 3.46                                      | 2.0 - 4.0                                                                                            |

The result of the materials tested meets the standards and hence can be used for the work  
Ambabhavani Nagara Cross Rd-4 Ch: 30.00m to 60.00m

ಶಾಖಾ ಸಹಾಯಕ ಅಧೀಕ್ಷಕರು  
ಯುಪಿಆರ್ ಅಧೀಕ್ಷಕರ ಅಪವಿಭಾಗ.  
ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-106

Page No. 1/1





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/DS4

Date: 18-03-2022

## 1. TEST REPORT ON BITUMINOUS MIXES : (STABILITY OF BITUMINOUS MIX)

**Sub:** To determine the stability of bituminous mix for DBM mix sample.**{Project\*:** Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}**Ref.:** Material testing/PMC/21-22,**Report Required for:** Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.**Name of the Agency/Contractor\*:** Sri. Gopireddy, Bangalore.

## TEST RESULTS

**Table 1: Properties of DBM (Gr-2) Mix**

| Sl. No. | Test Property                                 | *Test results obtained by Marshall method | Requirements of Dense Bituminous Macadam, Grade-2 as per M.o.R.T&H (IV Revision)-2001 Specifications |
|---------|-----------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------|
| 1       | Marshall Stability (75 blows) (At 60°C), kgs. | 1252                                      | 900                                                                                                  |
| 2       | Marshall Flow at 60°C, mm.                    | 3.40                                      | 2.0 - 4.0                                                                                            |

The result of the materials tested meets the standards and hence can be used for the work  
Ambabhavani Nagara Cross Rd-4 Ch: 64.80m to 82.80m

ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ ಅಭಿಯಂತರ  
ಯಲಹಂಕ ಸಾಟಲೈಟ್ ಉಪವಿಭಾಗ,  
ಇ.ಐ.ಎಂ.ಓ. ಬೆಂಗಳೂರು-108

Page No. 1/1





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/DBM7

Date: 18-03-2022

## 1. TEST REPORT ON BITUMINOUS MIXES :

### (BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## TEST RESULTS

### A. Type of Construction : Dense Graded Bituminous Macadam.

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 4.53 %

### 2. Gradation Test

TABLE 1.1

| Sieve Size, mm | Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation) | Gradation requirement as per Table 500-10 of MORTH Specifications- 2013 DBM (Grading - 2) |
|----------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 37.5           | 100                                                                               | 100                                                                                       |
| 26.5           | 98.05                                                                             | 90-100                                                                                    |
| 19.0           | 86.30                                                                             | 71-95                                                                                     |
| 13.20          | 72.65                                                                             | 56-80                                                                                     |
| 4.75           | 48.50                                                                             | 38-54                                                                                     |
| 2.36           | 36.95                                                                             | 28-42                                                                                     |
| 0.300          | 18.10                                                                             | 7-21                                                                                      |
| 0.075          | 6.45                                                                              | 2-8                                                                                       |

The result of the materials tested meets the standards and hence can be used for the work Sai Nagara 2nd Phase 10th Cross Rd Ch: 39.40m to 46.00m.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧೀನಾಧಿಕಾರಿ  
ಯಲಹಂಕರ ಉಪನಗರ ಉಪವಿಭಾಗ  
ಶಿ.ಬಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-106

Page No. 1/1





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/DBM8

Date: 21-03-2022

## 1. TEST REPORT ON BITUMINOUS MIXES :

### (BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## TEST RESULTS

### A. Type of Construction : Dense Graded Bituminous Macadam.

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 4.52 %

### 2. Gradation Test

TABLE 1.1

| Sieve Size,<br>mm | Percent by Weight passing the Sieve<br>from the sample supplied<br>(Obtained Gradation) | Gradation requirement as per Table<br>500-10 of MORTH Specifications-<br>2013 DBM (Grading - 2) |
|-------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 37.5              | 100                                                                                     | 100                                                                                             |
| 26.5              | 97.40                                                                                   | 90-100                                                                                          |
| 19.0              | 85.60                                                                                   | 71-95                                                                                           |
| 13.20             | 73.25                                                                                   | 56-80                                                                                           |
| 4.75              | 48.05                                                                                   | 38-54                                                                                           |
| 2.36              | 39.65                                                                                   | 28-42                                                                                           |
| 0.300             | 18.20                                                                                   | 7-21                                                                                            |
| 0.075             | 6.75                                                                                    | 2-8                                                                                             |

The result of the materials tested meets the standards and hence can be used for the work  
Sai Nagara 2nd Phase 11th Cross Rd Ch: 90.00m to 120.00m

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧೀನದಲ್ಲಿ  
ಯಲಹಂಕರ ಉಪನಗರ ಉಪವಿಭಾಗ.  
ಇ.ಟಿ.ಎಂ.ಕೆ. ಬೆಂಗಳೂರು-105

Page No. 1/1





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/DBM9

Date: 22-03-2022

## LTEST REPORT ON BITUMINOUS MIXES :

### (BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

### TEST RESULTS

#### A. Type of Construction : Dense Graded Bituminous Macadam.

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 4.54%

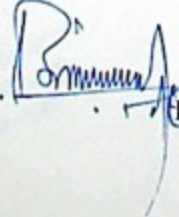
#### 2. Gradation Test

**TABLE 1.1**

| Sieve Size, mm | Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation) | Gradation requirement as per Table 500-10 of MORTH Specifications- 2013 DBM (Grading - 2) |
|----------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 37.5           | 100                                                                               | 100                                                                                       |
| 26.5           | 98.60                                                                             | 90-100                                                                                    |
| 19.0           | 83.95                                                                             | 71-95                                                                                     |
| 13.20          | 71.20                                                                             | 56-80                                                                                     |
| 4.75           | 49.35                                                                             | 38-54                                                                                     |
| 2.36           | 37.80                                                                             | 28-42                                                                                     |
| 0.300          | 19.25                                                                             | 7-21                                                                                      |
| 0.075          | 6.45                                                                              | 2-8                                                                                       |

The result of the materials tested meets the standards and hence can be used for the work  
Sai Nagara 2nd Phase 1st Cross Rd Ch: 0.00m to 30.00m

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧೀಯಂತರ  
ಯುಜಿಪಿಎಂ ಸಹನಗರ ಉಪವಿಭಾಗ,  
ಬಿ.ಬಿ.ಎಂ.ಡಿ. ಬೆಂಗಳೂರು-106

  
Page No. 1/1





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/DS9

Date: 22-03-2022

## 1. TEST REPORT ON BITUMINOUS MIXES : (STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for DBM mix sample.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## TEST RESULTS

Table 1: Properties of DBM (Gr-2) Mix

| Sl. No. | Test Property                                 | *Test results obtained by Marshall method | Requirements of Dense Bituminous Macadam, Grade-2 as per M.o.R.T&H (IV Revision)-2001 Specifications |
|---------|-----------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------|
| 1       | Marshall Stability (75 blows) (At 60°C), kgs. | 1254                                      | 900                                                                                                  |
| 2       | Marshall Flow at 60°C, mm.                    | 3.48                                      | 2.0 - 4.0                                                                                            |

The result of the materials tested meets the standards and hence can be used for the work  
Sai Nagara 2nd Phase 1st Cross Rd Ch: 0.00m to 30.00m

*[Signature]*  
Page No. 1/1



*[Signature]*  
ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ ಅಧೀನ  
ಯುನೈಟೆಡ್ ಉಪನಗರ ಉಪವಿಭಾಗ  
ಶಿ.ನಿ.ಎಂ.ಪಿ. ಬೆಂಗಳೂರು-108



GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/BC2

Date: 18-03-2022

## 1. TEST REPORT ON BITUMINOUS MIXES :

### (BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## TEST RESULTS

### A. Type of Construction : Bituminous Concrete

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 5.42%

### 2. Gradation Test

TABLE 1.1

| Sieve Size, mm | Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation) | Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2) |
|----------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 19.0           | 100                                                                               | 100                                                                                      |
| 13.2           | 97.25                                                                             | 90-100                                                                                   |
| 9.5            | 84.10                                                                             | 70-88                                                                                    |
| 4.75           | 62.45                                                                             | 53-71                                                                                    |
| 2.36           | 55.90                                                                             | 42-58                                                                                    |
| 1.18           | 42.75                                                                             | 34-48                                                                                    |
| 0.600          | 34.50                                                                             | 26-38                                                                                    |
| 0.300          | 21.35                                                                             | 18-28                                                                                    |
| 0.150          | 17.20                                                                             | 12-20                                                                                    |
| 0.075          | 8.40                                                                              | 4-10                                                                                     |

The result of the materials tested meets the standards and hence can be used for the work  
Avaikya Layout 4th Cross Rd Ch: 60.00m to 90.00m

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧೀಯಂತರ,  
ಯಲಹಂಕರ ಉಪನಗರ ಉಪವಿಭಾಗ,  
ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-100

Page No. 1/1





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/BC4

Date: 23-03-2022

## 1. TEST REPORT ON BITUMINOUS MIXES :

### (BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## TEST RESULTS

### A. Type of Construction : Bituminous Concrete

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 5.42 %

### 2. Gradation Test

**TABLE 1.1**

| Sieve Size, mm | Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation) | Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2) |
|----------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 19.0           | 100                                                                               | 100                                                                                      |
| 13.2           | 98.05                                                                             | 90-100                                                                                   |
| 9.5            | 85.45                                                                             | 70-88                                                                                    |
| 4.75           | 63.95                                                                             | 53-71                                                                                    |
| 2.36           | 56.25                                                                             | 42-58                                                                                    |
| 1.18           | 43.70                                                                             | 34-48                                                                                    |
| 0.600          | 35.15                                                                             | 26-38                                                                                    |
| 0.300          | 23.85                                                                             | 18-28                                                                                    |
| 0.150          | 17.60                                                                             | 12-20                                                                                    |
| 0.075          | 5.15                                                                              | 4-10                                                                                     |

The result of the materials tested meets the standards and hence can be used for the work  
Avaikya Layout Main Rd Ch: 224.60m to 254.60m

ಸಹಾಯಕ ಅಯುಷ್ಕಾರ ಅಧೀನದಲ್ಲಿ  
ಯುಜಿಎಸ್ ಉಪನಿರ್ದೇಶಕರು  
ಇ.ಎಂ.ಎ. ಬೆಂಗಳೂರು-10

AE

Page No. 1/1



#6, 1st Main, PavamanaNagara, KothanurdlInne Main Road, JPNagar 8th Phase, Bangalore-560078 E-mail:

essdhanu13@gmail.com



GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/BS4

Date: 23-03-2022

## 1. TEST REPORT ON BITUMINOUS MIXES : (STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavaninagara, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

| Sl. No. | Test Property                                 | *Test results obtained by Marshall method | Requirements of Bituminous Concrete, Grade-2 as per M.O.R.T&H (V Revision)-2013 Specifications |
|---------|-----------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------|
| 1       | Marshall Stability (75 blows) (At 60°C), kgs. | 1364                                      | 900                                                                                            |
| 2       | Marshall Flow at 60°C, mm.                    | 3.52                                      | 2.0 - 4.0                                                                                      |

The result of the materials tested meets the standards and hence can be used for the work  
Avaikeya Layout Main Rd Ch: 224.60m to 254.60m

*R. Gopireddy*  
AE

Page No. 1/1



*AG*  
*SS*  
ಸಹಾಯಕ ಅಯುಜನರ ಅಧಿಕಾರ  
ಯುಜನರ ಅಧಿಕಾರ ಸಹಾಯಕ  
ಅ. ಅ. ಎಂ. ಎ. ಬೆಂಗಳೂರು-108



GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/BC6

Date: 23-03-2022

## 1. TEST REPORT ON BITUMINOUS MIXES :

### (BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Project\*: Restoration and Improvements of Balance roads of Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## TEST RESULTS

### B. Type of Construction : Bituminous Concrete

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = 5.42 %

### 2. Gradation Test

TABLE 1.1

| Sieve Size, mm | Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation) | Gradation requirement as per Table 500-17 of MORTH Specifications- 2013 BC (Grading - 2) |
|----------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 19.0           | 100                                                                               | 100                                                                                      |
| 13.2           | 96.05                                                                             | 90-100                                                                                   |
| 9.5            | 82.45                                                                             | 70-88                                                                                    |
| 4.75           | 67.95                                                                             | 53-71                                                                                    |
| 2.36           | 54.25                                                                             | 42-58                                                                                    |
| 1.18           | 43.70                                                                             | 34-48                                                                                    |
| 0.600          | 32.15                                                                             | 26-38                                                                                    |
| 0.300          | 24.85                                                                             | 18-28                                                                                    |
| 0.150          | 17.55                                                                             | 12-20                                                                                    |
| 0.075          | 6.25                                                                              | 4-10                                                                                     |

The result of the materials tested meets the standards and hence can be used for the work  
Avaikya Layout 8th Cross Rd Ch: 90.00m to 100.40m

ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ ಅವಯಂಕರ  
ಯುಪಕರಣ ಸುಪರಗರ ಉಪವಿಭಾಗ  
ಶಿ.ಪಿ.ಎಂ.ವಿ. ಬೆಂಗಳೂರು-10

Page No. 1/1





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/CR1

Date: 14-03-2022

## 1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).

{Project\*: Restoration and Improvements of Balance roads of Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

### RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

#### CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>30</sub>**TABLE I.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 07-03-22         | 14-03-22        | 07          | 22500                       | 515                 | 22.89                                      | 23.41      |
|       | 002                       | "                | "               | "           | "                           | 540                 | 24.00                                      |            |
|       | 003                       | "                | "               | "           | "                           | 525                 | 23.33                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Muneeshwara Layout 2nd Cross Rd Ch: 60.00m to 90.00m

ಸಹಾಯಕ ಅಧೀಕ್ಷಕರ ಅಧೀನದಲ್ಲಿ  
ಯಶಸ್ವಿ ಸಂಸ್ಥೆ ಸಂಸ್ಥೆಗೆ ಸಲ್ಲಿಸಲಾಗಿದೆ.  
ಶಿ.ಪಿ.ಎಂ.ಡಿ. ಬೆಂಗಳೂರು-106

Signature  
AE

Page No. 1/1,





GST: 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/CR3

Date: 17-03-2022

## 1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).

{Project\*: Restoration and Improvements of Balance roads of Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

### CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

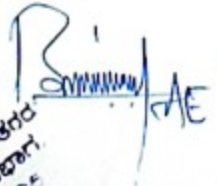
Grade of Concrete\* : M<sub>30</sub>

TABLE 1.1:

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 10-03-22         | 17-03-22        | 07          | 22500                       | 530                 | 23.56                                      | 23.33      |
|       | 002                       | "                | "               | "           | "                           | 530                 | 23.56                                      |            |
|       | 003                       | "                | "               | "           | "                           | 515                 | 22.89                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Muneeshwara Layout 2nd Cross Rd Ch: 150.00m to 180.00m

Page No. 1/1,

  
 ಸಹಾಯಕ ಮುಖ್ಯಮಂತ್ರಿ  
 ಯೋಜನೆ ಮತ್ತು ಸಾರ್ವಜನಿಕ ಕೆಲಸ  
 ಸಿ.ಪಿ.ಎಂ.ಓ. ಬೆಂಗಳೂರು-105





GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/CR4

Date: 21-03-2022

## 1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

### CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>30</sub>**TABLE 1.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 14-03-22         | 21-03-22        | 07          | 22500                       | 530                 | 23.56                                      | 23.48      |
|       | 002                       | "                | "               | "           | "                           | 520                 | 23.11                                      |            |
|       | 003                       | "                | "               | "           | "                           | 535                 | 23.78                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Munceshwara Layout 2nd Cross Rd Ch: 210.00m to 232.00m

*Signature*  
R. G. G. G.

Page No. 1/1,



ಸಹಾಯಕ ಕಾರ್ಯದರ್ಶಿ ಅಭಿಯಂತರ  
ಯಲಹಂಕರ ಉಪನಗರ ಉಪವಿಭಾಗ  
ಇ.ಡಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-106



GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/CR1A

Date: 04-04-2022

## 1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

## RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

### CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>20</sub>**TABLE 1.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 07-03-22         | 04-04-22        | 28          | 22500                       | 730                 | 32.44                                      | 32.59      |
|       | 002                       | "                | "               | "           | "                           | 745                 | 33.11                                      |            |
|       | 003                       | "                | "               | "           | "                           | 725                 | 32.22                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Muneeshwara Layout 2nd Cross Rd Ch: 60.00m to 90.00m

Page No. 1/1,



ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧೀನದಲ್ಲಿ  
ಯಂತ್ರಕರರ ಸಹವರ್ತಿ  
ಎ.ಎ.ಎ. ದೀಪಕ-106



GST : 29BLYPD0958A2ZW

# ESS ESS BUILDERS

ESS/QC-2/110V-Y3/2021-22/CR4A

Date: 11-04-2022

## 1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).

{Project\*: Restoration and Improvements of Balance roads of Ambabhavani layout, Ambabhavaninagara, SLN Enclave, Kere Anjeenappa layout, Sainagara Phase-2, Anugraha layout, Avikya layout and Surrounding areas in ward no-03 of Yelahanka New town Sub division (PACKAGE NO-03).}

Ref.: Material testing/PMC/21-22,

Report Required for: Assistant Executive Engineer,  
Yelahanka Satellite Town Sub Division,  
BBMP, Bangalore.

Name of the Agency/Contractor\*: Sri. Gopireddy, Bangalore.

### RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

#### CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete\* : M<sub>20</sub>**TABLE 1.1:**

| Sl No | Location/ Identification* | Date of Casting* | Date of Testing | Age in Days | C/S Area in mm <sup>2</sup> | Maximum Load in K.N | Compressive Strength (N/ mm <sup>2</sup> ) | Avg. Value |
|-------|---------------------------|------------------|-----------------|-------------|-----------------------------|---------------------|--------------------------------------------|------------|
| 1     | 001                       | 14-03-22         | 11-04-22        | 28          | 22500                       | 730                 | 32.44                                      | 32.67      |
|       | 002                       | "                | "               | "           | "                           | 740                 | 32.89                                      |            |
|       | 003                       | "                | "               | "           | "                           | 735                 | 32.67                                      |            |

The result of the materials tested meets the standards and hence can be used for the work  
Muneeshwara Layout 2nd Cross Rd Ch: 210.00m to 232.00m

*Signature*  
*Signature*  
 ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧಿಕಾರಿ  
 ಯಶವಂತರ ಉಪನಗರ ಉಪವಿಭಾಗ,  
 ಬಿ.ಬಿ.ಎಂ.ಸಿ. ಬೆಂಗಳೂರು-106

Page No. 1/1,

